

REMARKS

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.116, and in light of the remarks which follow.

Upon entry of the foregoing amendments, Claims 10-36 will be in this application. Claims 29-36 have been added.

Claims 10 and 17 have been amended to recite the two-component composition is a polyurethane composition, that the two part composition consists of, in a first container a first component comprising an addition compound of an aliphatic isocyanate and a blocking agent, and in a second container, at least one polyol. Support for this amendment is found in the specification at least on page 16, lines 8-16. Claim 18 has been amended to correct a typographical error. Claim 19 has been amended to be in independent form by including the elements of claim 10, from which it previously depended, and to correct a typographical error. Claim 21 has been amended to correct a typographical error and to recite that the addition compound of an aliphatic isocyanate and a blocking agent is provided in a first container and the at least one polyol is provided in a second container. Support for this is found in the specification at least on page 16, lines 8-13. Claim 24 has been amended to depend from claim 22. Claim 25 has been amended to recite a plurality of blocking agents and to more accurately describe the element regarding the carbon atoms. The term plurality is commonly understood to mean two or more, i.e. more than one. The previous version of the claim

recited several, which refers to more than one. Support for having two or more is found on page 12, line 35 - page 13, line 3, which states "the mean number of carbons of the masking agents use in this implementation to be at least 3.5." At least two, a plurality, of masking agents is required to meet this condition.

Claims 29-36 have been added. Claims 29-36 recite the steps of providing the compositions of claims 10-17 and mixing the contents of these compositions. Support for these claims are found throughout the specification, including page 16, lines 8-13 and in claims 10-17.

No new matter has been added in making these amendments.

Specification

The Office Action notes that the use of trademarks, such as CMI 1415, is found in the application and that they should be capitalized and be accompanied by the generic terminology.

The specification has been amended to capitalize the name of each of these products, i.e. TOLONATE® HDT, TOLONATE® DB, TOLONATE® HDT HR and JONCRYL SC 922X. Applicants note that when trademarks have been used in the specification, they have been accompanied by a description of the material.

Applicant's therefore request that this objection be withdrawn.

35 U.S.C. §112 first paragraph Rejections

Applicants gratefully acknowledge the withdrawal of the rejections of claims 10-20, for "position of blocking agent" and "aliphatic"

1. Claims 10-28 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Office Action notes that the acronym of HDB is not clearly defined and supported by the evidence.

The acronym HDB is a term of art that refers to the Hexamethylene Diisocyanate Biuret. Applicants direct the Examiner to Example 1, starting on page 14 of the specification, where lines 21-37 described the method of manufacturing HDT blocked compounds. Page 15, lines 11-18 recites:

For the other examples, the preparation is carried out as for example 1 using, as starting polyisocyanates, Tolonate® HDT, Rhodia, with an NCO content of 0.52 mol per 100 g, or commercial Tolonate® DB (Biuret) from Rhodia, with an NCO content of 22% by weight, or Tolonate HDT HR from Rhodia and, as blocking agents, 2-ethylimidazole or 2-propylimidazole or 50/50 mol % mixtures with 3,5-dimethylpyrazole.

The table on page 16 describes the properties of compositions using this process. There are three types of compositions listed in the table: HDT, HDT-HR and HDB. HDT was clearly described on page 14, line 22 and HDT-HR was clearly described on page 15, line 16. The other material which is described on page 15, line 14, is Tolonate® DB Biuret. It is clear that Tolonate® DB Biuret refers to HDB. There appears to have been a typographical error in not having an "H" before DB Biuret in the above recitation. Enclosed as Attachment A is a copy of a portion of the Material Safety

Data Sheet (MSDS) for Durothane B, which indicates that the chemical names biuret of hexamethylene diisocyanate, HDB and HDI Biuret are all known as naming the same compound and these terms are widely known in the art. Also enclosed as Attachment B is a portion of an article on Tolonate® Aliphatic polyisocyanates, which describes the HDB- and HDT-series of tolonates. Applicants respectfully submit that it is clear to one of ordinary skill in the art that the specification teaches the use of Tolonate HDB and that such a person would recognize such and that a typographical error occurred in the specification by the inadvertent omission of "H" before DB. The specification has been amended to correct this typographical error.

Applicants respectfully submit that the acronym HDB is a term of art well known in the art and is also clearly defined and supported in the specification. Applicants therefore request withdrawal of this rejection.

2. Claim 19 has been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Office Action indicates that the Examiner cannot find where the specification states that the composition is stored at 50-120°C, and therefore this is new matter.

Claim 19 has been amended to recite "subjecting the substrate coated with the two-component polyurethane to a temperature ranging from 50°C to 120°C, for a period of time at least equal to 1/2 hour." Support for this temperature, which is the same as in the previous amendment is found in original claim 9, which is shown below.

9. A process for the use of the compositions as claimed in claims 1 to 7, characterized in that it consists in spreading a coat of said composition over a substrate to be coated and in subjecting said composition to stoving at a temperature ranging from 50°C to 120°C, preferably from 50°C to 100°C, more preferably from 50°C to 100°C, for a period of time at least equal to 1/2 h, preferably at most equal to 2 h.

Support is also found in the French priority document, which recites:

9. Procédé d'utilisation des compositions selon les revendications 1 à 7, caractérisé par le fait qu'il consiste à étaler une couche de ladite composition sur un substrat à revêtir, et à soumettre ladite composition à une cuisson à une température allant de 50°C à 120°C, de préférence de 50°C à 100°C, plus préférentiellement de 50°C à 100°C pendant une durée au moins égale à 1/2 h, de préférence au plus égale à 2 h.

Applicants respectfully submit that Claim 19 complies with the enablement requirement. Applicants therefore request withdrawal of this rejection.

35 U.S.C. §112 second paragraph Rejections

Claims 18, 19, 24 and 25 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

a. The Office Action indicates that there is no antecedent basis for "polyurethanes" in Claim 18 and 19 a).

Claims 18 and 19 have been amended to delete "polyurethanes" and to recite "polyurethane", rendering this rejection moot.

b. The Office Action indicates that there is no antecedent basis for "said composition" in Claim 19 b).

Claim 19 has been amended to delete the phrase "said composition" rendering this rejection moot.

c. The Office Action indicates that for claim 24, there is no R in claim 21 and it appears that this claim should depend from claim 22.

Claim 24 has been amended to depend from claim 22. Therefore there is antecedent basis for R in amended claim 24.

d. The Office Action indicates that the use of "several" in Claim 25 is vague and indefinite.

Claim 25 has been amended to delete "several" and to recite a plurality of blocking agents are used.

Applicants therefore request withdrawal of these rejections under 35 U.S.C. §112, second paragraph.

Claim Objections

Applicants gratefully acknowledge the withdrawal of the objection to Claim 20.

35 U.S.C. §103(a) Obviousness Rejections

The Office Action indicates in Response to Arguments (page 6) that for each of the references cited below, each composition cited has both an isocyanate and a polyol, and therefore has two components. The Office Action alleges that the two components exist separately before being mixed, and therefore the compositions are two component compositions.

Applicants respectfully submit that this interpretation is not proper based on both the specification of the instant application (page 16, line 8 - page 17, line 33), the teachings of the prior art cited by the Office Action (U.S. Patent 6,013,326, col. 4, lines 26-32) and the knowledge of one of ordinary skill in the art, where one-component and two-component coating compositions have specific meanings, as pointed out in the specifications cited above.

1. Claims 10-28 have been rejected under 35 U.S.C. §103(a) as unpatentable over JP 62-164049.

Applicants respectfully submit that these claims are not obvious over JP 62-164049 and that indeed all of the claims as amended are allowable.

To establish a *prima facie* case of obviousness, three basic criteria must be met. (MPEP 2143) First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must

be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The '049 Patent discloses a planographic printing plate in which a recording layer is produced using a composition comprising a polymer having an active hydrogen that can react with a block isocyanate, an isocyanate and a photothermal substance. The '049 patent discloses 1,6-hexamethylene diisocyanate and a blocking agent having an imidazole group (Synthesis Example 1). The '049 patent does not teach combining the compound of Synthesis Example 1 with a polyol. The '049 patent also does not disclose any information regarding two-component compositions and methods of using such compositions.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. There is no suggestion or motivation in the '049 patent to obtain a two component composition as required in the claims of the instant application. The Office Action alleges in Response to Arguments (page 6) that the two components exist separately before being mixed, and therefore the compositions are two component compositions. This position taken by the Office Action means that the '049 patent requires at least a three component system, as shown in Application Example 1. Application Example 2, requires a five component system, using this position. Therefore, there is no suggestion or motivation in the '049 Patent to modify the '049 patent to obtain the invention of the instant application.

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. There is no reasonable expectation of success based on the teachings in the '049 patent that a two component composition could be prepared because the '049 patent is silent on a two component composition. There cannot be a reasonable expectation of success in obtaining the Applicants' invention when the cited prior art does not provide any teachings regarding a required element in a composition and does not provide any teaching that the recited effects would result from application of the composition. Therefore there is no reasonable expectation of success in producing the applicants' invention based on the teachings in the cited prior art.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The '049 patent does not teach or suggest the use of a two-component composition as required by the claims. The Office Action alleges in Response to Arguments (page 6) that the two components exist separately before being mixed, and therefore the compositions are two component compositions. This position taken by the Office Action means that the '049 patent requires at least a three component system, as shown in Application Example 1. Application Example 2, requires a five component system, using this position. Therefore the '049 patent does not teach or suggest all the claim limitations.

Applicants respectfully submit that the claims are not obvious over JP 62-164049 and the rejection should be withdrawn.

2. Claims 10, 11, 14-22 and 25-28 have been rejected under 35 U.S.C. §103(a) as unpatentable over Flosbach et al. (U.S. 6,013,326).

Flosbach describes coating compositions comprising hydroxy-functional methacrylate copolymers and free or blocked isocyanates. Flosbach teaches the isocyanates can be blocked using imidazoles. Flosbach teaches:

The coating compositions according to the invention contain one or more free or blocked polyisocyanates as component D). If blocked polyisocyanates are present, the coating compositions according to the invention are one-component (one-pack) coating compositions. If free polyisocyanates are present, they are formulated as two-component (two-pack) systems. (col. 4, lines 26-30) (Emphasis added)

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. There is no suggestion or motivation in Flosbach to modify or combine the reference teachings to obtain a two-component composition when using blocked isocyanates. In fact Flosbach teaches away from such a composition by the teaching recited above, which states that blocked polyisocyanates are used in one component coating compositions. This teaches away from the use of blocked polyisocyanates in a two-component system. There cannot be a suggestion or motivation when the reference specifically teaches away from a claimed element. Therefore, there is no suggestion or motivation, either in the Flosbach to modify the reference or to combine reference teachings to obtain the invention of the instant application.

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. There cannot be a reasonable expectation of success in obtaining the Applicants' invention when the cited prior art specifically teaches against using a two component composition, as recited above. Therefore there is no reasonable expectation of success in producing the applicants' invention based on the teachings in the cited prior art.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Flosbach does not teach or suggest a two component system when blocked isocyanates are used. As shown above, Flosbach teaches away from a required element. Therefore, the prior art references, either alone or combined do not teach or suggest all the claim limitations.

Applicants respectfully submit that the claims are not obvious over Flosbach and the rejection should be withdrawn.

3. Claims 10-18 and 21-28 have been rejected under 35 U.S.C. §103(a) as unpatentable over JP 60-040121.

The Office Action states that the '121 patent teaches a coating composition of a polyol and HMDI blocked with 2-isopropyl or 2-n-butyl-imidazole and that it would appear that a mixture would result in the limitations of claim 14. The Office Action refers to the Abstract.

The '121 Patent recites:

Thus, 16.8 parts 1,6-hexamethylene diisocyanate and 100 parts polyethylene-polypropylene glycol glycerol ether were mixed 60 min at 90° to give a urethane prepolymer (I, 3.50% NCO). Then, 10.7 parts 2-isoproylimidazole in 20 parts MEK was mixed 3 h with I at 60°, "

The '121 patent also teaches heating the final mixture to 140°C to obtain the resin film

The procedure taught in the '121 patent reacts the diisocyanate with the polyol to form a urethane prepolymer and then adds 2-isoproylimidazole. This process is distinct from the current invention, which requires a first container containing a first component comprising an addition compound of an aliphatic isocyanate and a blocking agent and a second container containing a second component comprising at least one polyol. The '121 patent does not teach a two-component polyurethane system and also does not use the first and second components of the two component system, as required by the claims of the instant invention.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The procedure taught in the '121 patent does not provide a first component comprising an addition compound of an aliphatic isocyanate and a blocking agent as required in the claims of the instant application. Rather, the '121 patent teaches combining the isocyanate and the polyol to form a prepolymer and then adding 2-isoproylimidazole. There is no suggestion or motivation in the '121 Patent to modify the patent to obtain a two-component polyurethane composition. There is also no suggestion in the '121 patent that a process for coating a substrate could be used a

maximum temperature of 120°C, as required by claim 19 and claims depending from claim 19, when the '121 patent required a temperature of 140°C. Therefore, there is no suggestion or motivation, either in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to obtain the invention of the instant application.

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. There is no reasonable expectation of success based on the teachings in the '121 Patent that a two component composition could be prepared because the '121 teaches combining the isocyanate with the polyol to form the prepolymer before the addition of 2-isopropylimidazole. The '121 patent is related to one-component polyurethanes, as described on page 17, lines 1-11 of the instant specification, which require thermal deblocking, generally above 140°C. Therefore there is no reasonable expectation of success in producing the applicants' invention based on the teachings in the cited prior art.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The '121 Patent does not teach or suggest a two-component polyurethane as required by the claims. The '121 patent does not teach or suggest a first container containing a first component comprising an addition compound of an aliphatic isocyanate and a blocking agent and a second container comprising a polyol, where the two components are mixed. The 121' Patent does not teach or suggest that a process for coating a substrate could be used a maximum temperature of 120°C, as required by claim 19 and claims

depending from claim 19, when the '121 patent required a temperature of 140°C.

Therefore, the prior art reference does not teach or suggest all the claim limitations.

Applicants respectfully submit that the claims are not obvious over JP 60-040121 and the rejection should be withdrawn.

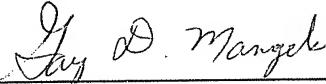
In view of the foregoing, it is believed that all record rejections are untenable and should be withdrawn. Further, favorable action in the form of a Notice of Allowance is believed to be next in order and is respectfully solicited.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By:


Gary D. Mangels
Gary D. Mangels, Ph.D.
Registration No. 55424

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620